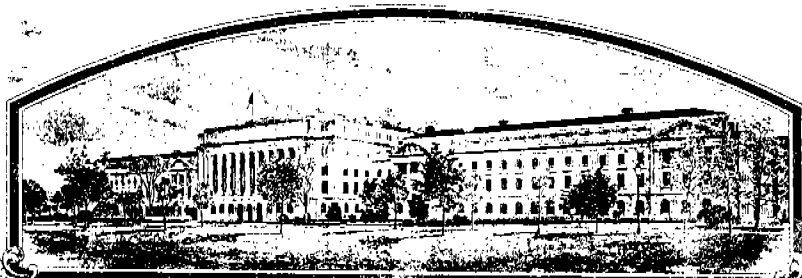


No.



7700035

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Soybean Research Foundation, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *seventeen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (T. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'DS 160'



Attest:

J. R. Rollin
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

*In Testimony Whereof, I have hereunto set
my hand and caused the seal of the Plant
Variety Protection Office to be affixed
at the City of Washington
this 24th day of August in
the year of our Lord one thousand nine
hundred and seventy-seven*

B. B. Berglund
Secretary of Agriculture

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

| | | | |
|--|--|--|---|
| 1a. TEMPORARY DESIGNATION OF VARIETY PL 70554D | 1b. VARIETY NAME DS 160 PL 70554D <i>NS</i> | FOR OFFICIAL USE ONLY PV NUMBER 7700035 | |
| 2. KIND NAME Soybeans | 3. GENUS AND SPECIES NAME Glycine max (L.) Merr. | FILING DATE 1-31-77 | TIME 11:30 A.M. |
| 4. FAMILY NAME (BOTANICAL) Leguminosae | 5. DATE OF DETERMINATION February, 1975 | FEE RECEIVED \$ 250.00 \$ 250.00 \$ 250.00 | DATE 1-31-77 3-17-77 8-15-77 |
| 6. NAME OF APPLICANT(S) Soybean Research Foundation, Inc. | 7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) P.O. Box #72 Mason City, Illinois 62664 | 8. TELEPHONE AREA CODE AND NUMBER 217 482-3219 | |
| 9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Corporation | | 10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION Illinois | 11. DATE OF INCORPORATION April 28, 1965 |

12. Name and mailing address of applicant representative(s), if any, to serve in this application and receive all papers:

**Arnold L. Matson
Director of Soybean Breeding
Soybean Research Foundation, Inc.
Mason City, Illinois 62664**

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- ☒ 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
☒ 13B. Exhibit B, Novelty Statement.
☒ 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)
☐ 13D. Exhibit D, Additional Description of the Variety.

14A. Does the applicant(s) specify that seed of this variety be sold by variety name only as a class of certified seed?
(See Section 83(a). (If "Yes," answer 14B and 14C below.) ☐ YES ☒ NO14B. Does the applicant(s) specify that this variety be limited as to number of generations?
☐ YES ☒ NO

14C. If "Yes," to 14B, how many generations of production beyond breeder seed?

☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

15. Does the applicant(s) agree to the publication of his/her (their) name(s) and address in the Official Journal?

☒ YES ☐ NO

16. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be deposited upon request before issuance of a certificate and will be replenished periodically in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

Jan 25, 1977
(DATE)

Arnold L. Matson
(SIGNATURE OF APPLICANT)

(DATE)

(SIGNATURE OF APPLICANT) 00001

Application 7700035

DS 160 (PL 70554D)

Exhibit A -

DS 160 soybeans (*Glycine max* (L.) Merr.) originated from a single F₆ plant grown in 1969 from the cross Harosoy 63 x PI 248406. This plant was discovered to be heterozygous for tan and brown pods and in 1974 seed from randomly selected plants were grown in plant rows and all seed produced in the rows found to be homozygous for brown pods were bulked to produce breeders seed of DS 160. The bulk appears to be stable for all phenotypic characteristics. All breeding and selection work was carried out at the Soybean Research Foundation under the supervision of Dr. Arnold L. Matson.

Exhibit B -

DS 160 is most similar to SRF 150 but DS 160 is a little bushier, has brown pubescence instead of grey and has ovate leaves instead of lanceolate leaves. It also has about 2800 seeds per lb. compared to 3000 for SRF 150. DS 160 and Gutwein 180 are phenotypically identical except that DS 160 has brown pods and Gutwein 180 has tan pods.

OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (GLYCINE MAX)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)

Soybean Research Foundation, Inc.

ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code)

P.O. Box #72
Mason City, Illinois 62664

FOR OFFICIAL USE ONLY

PVPO NUMBER 7700035

VARIETY NAME OR TEMPORARY
DESIGNATION

PL 70554D DS-160 R/S

Place the appropriate number that describes the varietal character of this variety in the boxes below.

1. SEED SHAPE:

☒ 1 = SPHERICAL ☐ 2 = SPHERICAL FLATTENED ☐ 3 = ELONGATE ☐ 4 = OTHER (Specify)

2. SEED COAT COLOR:

☒ 1 = YELLOW ☐ 2 = GREEN ☐ 3 = BROWN ☐ 4 = BLACK
☐ 5 = OTHER (Specify)

SHADE:

☒ 1 = LIGHT ☐ 2 = MEDIUM ☐ 3 = DARK

3. SEED COAT LUSTER:

☒ 1 = DULL ☐ 2 = SHINY

4. SEED SIZE

☒ 15 GRAMS PER 100 SEEDS

5. HILUM COLOR:

☒ 1 = BUFF ☐ 2 = YELLOW ☐ 3 = BROWN ☐ 4 = GRAY ☐ 5 = IMPERFECT BLACK
☐ 6 = BLACK ☐ 7 = OTHER (Specify)

SHADE:

☒ 1 = LIGHT ☐ 2 = MEDIUM ☐ 3 = DARK

6. COTYLEDON COLOR:

☒ 1 = YELLOW ☐ 2 = GREEN

7. LEAFLET SIZE (See Reverse):

☒ 1 = SMALL ☐ 2 = MEDIUM ☐ 3 = LARGE

8. LEAFLET SHAPE:

☒ 1 = OVATE ☐ 2 = OBLONG ☐ 3 = LANCEOLATE ☐ 4 = ELLIPTICAL ☐ 5 = OTHER (Specify)

9. LEAF COLOR (See reverse):

☒ 1 = LIGHT GREEN ☐ 2 = MEDIUM GREEN ☐ 3 = DARK GREEN

10. FLOWER COLOR:

☒ 1 = WHITE ☐ 2 = PURPLE
☐ 3 = OTHER (Specify)

11. POD COLOR:

☒ 1 = TAN ☐ 2 = BROWN ☐ 3 = BLACK

12. POD SET:

☒ 1 = SCATTERED ☐ 2 = CONCENTRATED

13. PLANT PUBESCENCE COLOR:

☒ 1 = GRAY ☐ 2 = BROWN ☐ 3 = OTHER (Specify)

SHADE:

☒ 1 = LIGHT ☐ 2 = MEDIUM ☐ 3 = DARK

14. PLANT TYPES (See Reverse):

☒ 1 = SLENDER ☐ 2 = BUSHY ☐ 3 = INTERMEDIATE

15. PLANT HABIT:

☒ 1 = DETERMINATE ☐ 2 = INDETERMINATE
☐ 3 = OTHER (Specify)

16. HYPOCOTYL COLOR:

☒ 1 = GREEN ☐ 2 = PURPLE

17. SEED PROTEIN:

☒ 1 = A ☐ 2 = B

18. NUMBER OF DAYS TO FLOWERING

(Place a zero in first box (e.g. 0 9) when days are 9 or less.)

19. MATURITY GROUP:

☒ 1 = 00 ☐ 2 = 0 ☐ 3 = I ☐ 4 = II ☐ 5 = III
☐ 6 = IV ☐ 7 = V ☐ 8 = VI ☐ 9 = VII ☐ 10 = VIII

20. SIZE OF 10 DAY OLD SEEDLING GROWN UNDER CONSTANT LIGHT (Growth Chamber) AT 25° C. (Place a zero in first box (e.g. 0 2) when size is 9 mm. or less.)

 MM. LENGTH OF SEEDLING MM. LENGTH OF COTYLEDON MM. WIDTH OF COTYLEDON

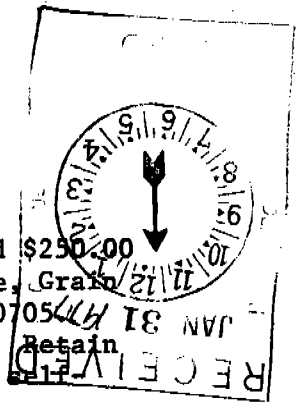
21. DISEASE: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

☐ BACTERIAL PUSTULE☐ SOYBEAN CYST☐ DOWNY MILDEW☐ PURPLE STAIN☐ POD AND STEM BLIGHT☐ ROOT KNOT☐ FROGEYE☐ STEM CANKER☒ PHYTO-PHTHORA☐ BROWN STEM ROT☐ TARGET SPOT☐ BROWN SPOT☐ BUD BLIGHT☐ WILDFIRE☐ RHIZOCTONIA ROT☐ OTHER (Specify)

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INSTRUCTIONS

GENERAL: Send an original copy of the application, exhibits and fee to U.S. Dept. of Agriculture, Agricultural Marketing Service, Grain Division, National Agricultural Library, Beltsville, Maryland 20705. (See Section 180.175 of the regulations and rules of practice.) Retain one copy for your files. All items on the face of the form are explanatory unless noted below.



ITEM

- 5 Give the date the applicant determined that he had a new variety based on (1) the definition in Section 41(a) of the Act and (2) the date a decision was made to increase the seed.
- 13a Give (1), the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method. (2), the details of subsequent stages of selection and multiplication. (3), the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4), evidence of stability.
- 13b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties; (1) identify these varieties and state all differences objectively; (2) Attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.
- 13c Fill in the Exhibit C, Objective Description form for all characteristics, for which you have adequate data.
- 13d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe; such as; plant habit, plant color, disease resistance, etc.
- 14A If "YES" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled or published or the certificate has been issued. However, if the applicant specifies "NO", he may change his choice. (See Section 180.15 of the Regulations and Rules of Practice.)

PV No. 7700035

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

| CHARACTER | NAME OF VARIETY | CHARACTER | NAME OF VARIETY |
|--------------|-----------------|-----------------------|-----------------|
| Plant shape | Williams | Petiole angle | |
| Leaf shape | Corsoy | Seed size | Hodgson |
| Leaf color | Wayne | Seed shape | Amsoy |
| Leaf surface | | Seedling pigmentation | Harosoy |

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY:

| VARIETY | NO. OF DAYS TO MATURITY | LODGING SCORE | PLANT HEIGHT | LEAF SIZE | | CONTENT | | AVERAGE NO. OF PODS PER PLANT | PLANT NO. |
|-------------------------|-------------------------|---------------|--------------|-----------|--------|---------|--------|-------------------------------|-----------|
| | | | | Width | Length | Protein | Oil | | |
| Submitted | 119 | 1.8 | 32" | 62mm | 93mm | 41.6 | 21.8 % | | |
| Name of similar variety | | | | | | | | | |
| Corsoy | 123 | 2.7 | 34" | 78mm | 124mm | 41.5 | 20.7 | | |

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for completing this form:

1. Scott, Walter O. and Samuel R. Aldrich, 1970, Modern Soybean Production, The Farmer Quarterly.
2. Norman, A. G., 1963, The Soybean: Genetics, Breeding, Physiology, Nutrition, Management.
3. McKie, J. W., and K. L. Anderson, 1970, The Soybean Book.

LEAF COLOR: Nickerson's or any recognized color fan may be used to determine the leaf color of the described variety. The following Soybean varieties may be used as a guide to identify the colors listed on the form.

| COLOR | VARIETY |
|--------------|----------|
| Light Green | "Ada" |
| Medium Green | "Wilkin" |
| Dark Green | "Swift" |

LEAF SIZE: The following varieties may be used as a guide to identify the relative size leaves.

| SIZE | VARIETY |
|--------|---------|
| Small | "Amsoy" |
| Medium | "Bonus" |
| Large | "Anoka" |

PLANT TYPE: The following varieties may be used as a guide to identify the plant type.

| TYPE | VARIETY |
|--------------|------------|
| Slender | "Vansoy" |
| Intermediate | "Wirth" |
| Bushy | "Adelphia" |

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